REMARKS

Claims 1-34 are all the claims pending in the application.

Preliminary Matters

Applicant thanks the Examiner for initialing and returning the Form PTO/SB/08

submitted with the Information Disclosure Statement filed on October 15, 2009.

Claim Rejections - 35 U.S.C. § 103

Claims 1-3, 6-10, 13-17, 19-24 and 26-33 are rejected under 35 U.S.C. § 103(a) as

allegedly being unpatentable over Horiguchi et al. (U.S. Pub. 2002/0071387, hereinafter

"Horiguchi") in view of Uriu et al. (U.S. Patent 6,430,157, hereinafter "Uriu"). Applicant

respectfully traverses the rejection.

Claims 1, 8, 15, 22, 33, and 34

According to an embodiment discussed in the specification, a total transmission rate is

calculated for first and second relay connections that are being used for relay. The total

transmission rate is divided and allocated as the first and second relay connections. By

determining the first and second transmission rates, and dividing the total transmission rate for

allotment as the first and second relay connections, it becomes possible to allocate high

bandwidth to one relay connection and to circulate bandwidth among the connections.

Independent claim 1 discloses a related configuration and recites, *inter alia* (emphasis added):

> terminating, at the transport layer relay device, *a **first** transport layer
> connection* between a first source terminal and a first destination terminal *at a
> **first** transmission rate* in the transport layer and *a **second** transport layer
> connection* between a second source terminal and a second destination terminal *at
> a **second** transmission rate* in the transport layer;
> relaying data flow of said first transport layer connection to said first
> destination terminal as *a **first** relay connection* and data flow of said second
> transport layer connection to said second destination terminal as *a **second** relay*

connection to respectively separate said first and second transport layer connections;

determining *a total transmission rate of said first and second relay connections based on the first and second transmission rates*; and

allocating *the total transmission rate among each of said first and second relay connections*.

Applicant respectfully submits that the combination of Horiguchi and Uriu neither teaches nor suggests this claimed combination of features.

At pages 4 and 5 of the Office Action, the Examiner's position is based on the assertion that paragraph 47 of Horiguchi discloses determining a total transmission rate of first and second relay connections, and allocating the total transmission rate to the first and second relay connections. Applicant respectfully submits that paragraph 47 of Horiguchi discloses a plurality of logical lines for relaying packets, and a plurality of queues for storing packets on a logical line basis (*see* Horiguchi, ¶¶ 47, 50). However, Horiguchi also discloses "a rate controller configured to generate timing for outputting packets stored in each queue at a *predetermined rate* for each logical line" (*see* Horiguchi, ¶ 20). Applicant respectfully submits that, since Horiguchi discloses outputting packets in the queues at a "predetermined rate," Horiguchi does not disclose or suggest the combination of features in claim 1 including "determining a total transmission rate" and "allocating the total transmission rate."

Further, Horiguchi discloses rate controller 104 in bandwidth control portion 10 that controls the timing at which packets are output, such that packets are output at a rate *preset* for each logical line (*see* Horiguchi, ¶ 50, ll. 1-4, "rate controller 104 generates packet readout timing so that those packets…can be outputted at a data rate *preset* for each priority queue"). Accordingly, the control of the timing by the rate controller 104 in Horiguchi is performed such that high-priority packets stored in the queue will be preferentially output. Therefore, in

Horiguchi, an output rate is *previously set* for each logical line, and the rate controller 104

outputs packets according to the previously set rate. Horiguchi cannot allocate high bandwidth

to a specific logical line and circulate bandwidth among logical lines, as similarly recited in

claim 1. Accordingly, the communication in Horiguchi is not efficient, as opposed to the

communication described in the embodiments of the specification (*see e.g.*, Specification, p. 2, ll.

9-26) and recited in the claims.

Still further, packet forwarder (FWD) 30 in Horiguchi only changes contents of packets

and converts formats of packets (*see* Horiguchi, ¶ 46, "second FWD 30 for changing contents or

converting formats of data scheduled to be transferred by the bandwidth control portion 10").

There is no teaching or suggestion that the packet forwarder allocates a total transmission rate

among relay connections, as similarly recited in claim 1.

Uriu discloses ATM communication line control where a transmission allowed rate is

stored in a management cell and is communicated. A transfer path of the management cell is

divided into a path between an external device (terminal) and a system, and into an intra-system

path, and a loop control is carried out in each path. In Uriu, the state information (bandwidth

information and congestion information) of the ATM network is stored , and a rate is selected

between a peak cell rate and a minimum cell rate based on the information in the management

cell to transmit the selected cell (*see* Uriu, col. 1, ll. 7-16). Accordingly, the transmission rate in

Uriu is calculated based on which the congestion information for the cell (*see* Uriu, col. 2, ll. 19-

33).

Applicant respectfully submits that the calculation of the transmission rate in Uriu does

not determine "a total transmission rate" and allocate "the total transmission rate," as recited in

claim 1. Uriu does not describe or suggestion calculation of the total transmission rate of a

plurality of paths. Further, since Uriu does not calculate the total transmission rate, Uriu cannot disclose or suggest "allocating" the total transmission rate to plural connections.

As a result, Applicant respectfully submits that, even if Horiguchi and Uriu could have somehow been combined, the combination of Horiguchi and Uriu would still fail to teach or suggest the combination of features recited in claim 1. Therefore, Applicant respectfully submits that claim 1 and its dependent claims would not have been rendered unpatentable by the combination of Horiguchi and Uriu for at least these reasons.

To the extent independent claims 8, 15, 22, 33, and 34 recite features similar to those discussed above regarding claim 1, Applicant respectfully submits that claims 8, 15, 22, 33, 34, and their dependent claims also would not have been rendered unpatentable by the combination of Horiguchi and Uriu for at least reasons analogous to those discussed above regarding claim 1.

Claims 5, 12 and 19 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Horiguchi in view of Uriu, as applied to claims 1, 8 and 15, and further in view of Yao et al. (U.S. Patent 6,097,697, hereinafter "Yao"). Applicant respectfully traverses the rejection.

Claims 5, 12, and 19 depend on claims 1, 8, and 15, respectively, and incorporate all the features of claims 1, 8, and 15. Yao is cited merely for teaching application information. Applicant respectfully submits that, even if Horiguchi, Uriu, and Yao could have somehow been combined, the combination of Horiguchi, Uriu, and Yao would still fail to teach or suggest the combination of features in claims 1, 8, and 15, and hence claims 5, 12, and 19, as discussed above. Accordingly, Applicant respectfully submits that claims 5, 12, and 19 would not have been rendered unpatentable by the combination of Horiguchi, Uriu, and Yao for at least these reasons.

Claims 4, 11 and 18 are rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Horiguchi in view of Uriu, as applied to claims 1, 8 and 15, and further in view of Rochberger et al. (U.S. Patent 6,760,309, hereinafter "Rochberger"). Applicant respectfully traverses the rejection.

Claims 4, 8, and 11 depend on claims 1, 8, and 15, respectively, and incorporate all the features of claims 1, 8, and 15. Rochberger is cited merely for teaching effective transmission rates. Applicant respectfully submits that, even if Horiguchi, Uriu, and Rochberger could have somehow been combined, the combination of Horiguchi, Uriu, and Rochberger would still fail to teach or suggest the combination of features in claims 1, 8, and 15, and hence claims 4, 11, and 18, as discussed above. Accordingly, Applicant respectfully submits that claims 4, 11, and 18 would not have been rendered unpatentable by the combination of Horiguchi, Uriu, and Rochberger for at least these reasons.

Claim 25 is rejected under 35 U.S.C. § 103(a) as allegedly being unpatentable over Horiguchi in view of Uriu, as applied to claim 22, and further in view of Rochberger. Applicant respectfully traverses the rejection.

Claim 25 depends on claim 22 and incorporates all the features of claim 22. Rochberger is cited merely for teaching effective transmission rates. Applicant respectfully submits that, even if Horiguchi, Uriu, and Rochberger could have somehow been combined, the combination of Horiguchi, Uriu, and Rochberger would still fail to teach or suggest the combination of features in claim 22, and hence claim 25, as discussed above. Accordingly, Applicant respectfully submits that claim 25 would not have been rendered unpatentable by the combination of Horiguchi, Uriu, and Rochberger for at least these reasons.

Conclusion

In view of the above, reconsideration and allowance of this application are now believed to be in order, and such actions are hereby solicited. If any points remain in issue which the Examiner feels may be best resolved through a personal or telephone interview, the Examiner is kindly requested to contact the undersigned at the telephone number listed below.

The USPTO is directed and authorized to charge all required fees, except for the Issue Fee and the Publication Fee, to Deposit Account No. 19-4880. Please also credit any overpayments to said Deposit Account.

Respectfully submitted,

/ Christopher J. Bezak /

SUGHRUE MION, PLLC   _____
Telephone: (202) 293-7060   Christopher J. Bezak
Facsimile: (202) 293-7860   Registration No. 63,241

WASHINGTON OFFICE
23373
CUSTOMER NUMBER

Date: May 19, 2010